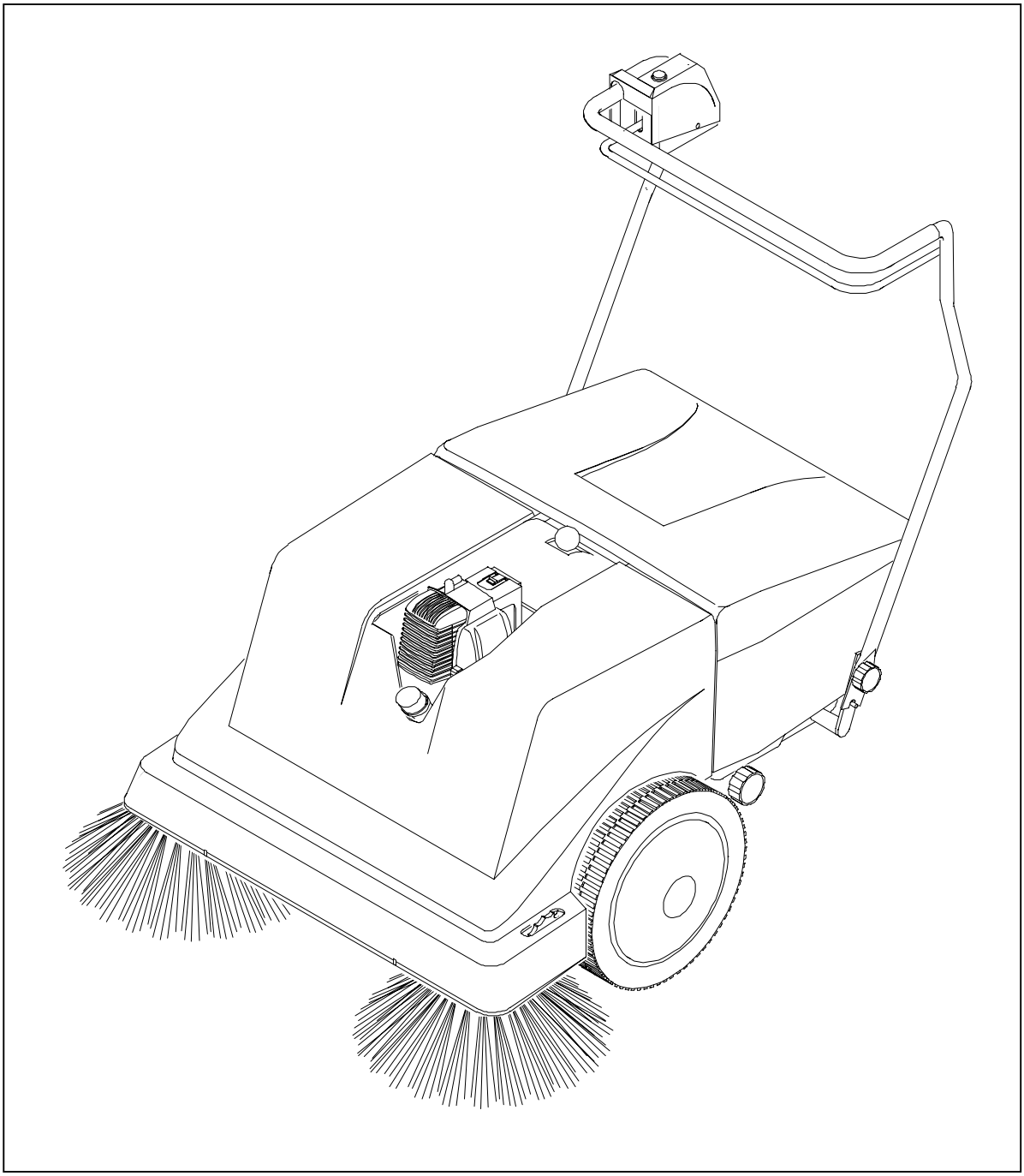
STOLZENBERG

Kehrmaschinen



Operating instructions for Sweeping-/ Suctionmachine Tandem KSV

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Operating Instructions for the Sweeping and Suction Machine Tandem 900 KSV

! Please read this before operating the sweeping machine!

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Indications in the operating instructions:

Notice! Danger!

Caution!

Warning: electrical voltage

Absolutely important

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1. Safety Information:

Application:
Before use, check that the unit and operating equipment are in perfect condition and are safe to operate. Do not use the unit if it is not in perfect condition.
This sweeping and suction machine is intended exclusively for operation on solid, level, and dry surfaces with an inclination not exceeding 2%.

Do not sweep up/draw in burning or glowing objects.
This unit must not be used for removing dust which is hazardous to your health unless specifically indicated on the unit. Comply with the safety information in the operating instructions!
This unit is only suitable for use on surfaces indicated in the operating instructions.
The machine may only be used on surfaces approved by the company or its representatives.
It is not permitted to remain in a dangerous area. It is forbidden to operate the unit in potentially explosive locations.

Operation:

The operator must use the unit in accordance with the regulations. He/she must take the local conditions into account during operation and be aware of other people, especially children, when operating the unit.
The unit may only be used by authorised persons who have received training or have demonstrated their ability to operate the unit.
The unit must not be operated by children or minors.

The unit must never be left unsupervised while the motor is running. The operator may only leave the unit when the motor has been switched off, the unit has been secured against unintentional movement and, if required, the parking brake has been actuated and the ignition key removed.
Do not reach into or under the machine under any circumstances when the motor is running.
The hood latch should remain secured in the closed position except when performing maintenance work.

Transport:
Switch off the motor and secure the unit before transporting.

Maintenance:
Switch off the motor and if necessary remove the ignition key prior to cleaning and maintenance work, replacing components or changing over to another function.

Pull off the spark plug connectors in the case of machines with gasoline engines.
Do not spray clean the unit.
Repairs may only be carried out by authorized customer service centers or by specialists in this fields who are familiar with all of the relevant safety regulations.

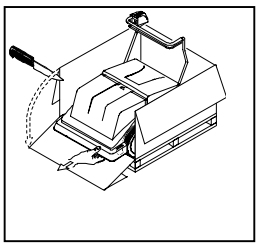
Commercial units which may be used in different locations are subject to a safety check according to VDE 0701.

Accessories and spare parts:
Only use accessories and spare parts which have been approved by the manufacturer. Original accessories and spare parts guarantee that the unit can be operated safely and without any breakdowns.

Machines operated with gasoline engines:
The operating instructions of the motor manufacturer are to absolutely be followed.
Only use lead-free fuel.
Absolutely adhere to the oil-change intervals!!!
This machine is designed for operation in dry areas only.

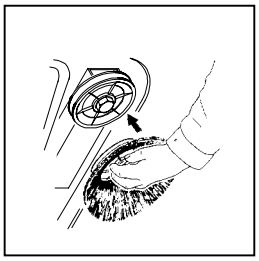
2. Technical Data:

Sweeping width: 2 side brushes	900 mm
1 side brush	700 mm
without side brushes	500 mm
Working speed:	up to 4.0 km/h
Surface cleaning capacity with 2 side brooms	3,600 m^2/h
Volume flow:	200 m^3/h
Vacuum	7 pa
Filter surface:	1.3 m^3
Absorptive capacity of the sweeping vessel:	60 l
Allowable inclination:	2%
Length x width x height:	1,000 780 x 460 mm (without steering handle)
Displacement:	31 cc
Set speed:	5200 r.p.m. (Do not adjust speed)
Power at set speed (HP/kW):	1.18 / 0.87
Gas tank contents:	Approx. 1.0 l
Weight:	52 kg
Sound level:	69 dB(A)

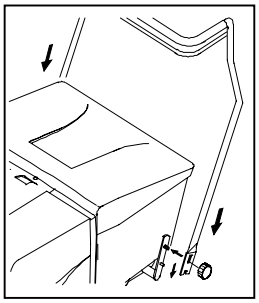


3. Unpacking and Assembling

Let the box stand on the pallet. Cut the front side open and let the machine roll over the side of the box which has been folded down (see Figure) so that the running wheels are still standing on the pallet.

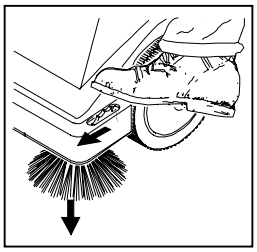


In this position, clip the side brushes which are on the dirt container under the side brush plate (in the front exterior portion of the machine) (see Figure). Apply light pressure to twist the brushes upwards until you can feel them lock into place. Note: do not tip over the machine in this process: there is the danger of battery acid running out.
First roll the machine from the box and from the pallet.



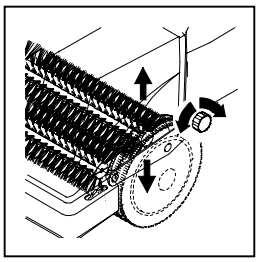
Afterwards, put the steering handle in the upright position, pull it downwards into the two tappets completely (see Figure) and tighten it with the two thumb screws.

Afterwards, open the tank nozzle located in the front part of the machine.
Top up approx. 1 litre unleaded regular fuel.
Please note that the engine was already filled with approx. 100 ccm universal lubricant – 15W40 at the factory.

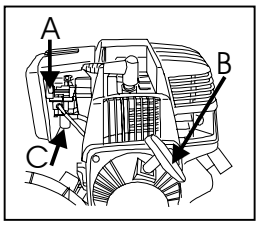


4. Starting Up/Operating

After the machine has been assembled, it is immediately ready for operation.
First of all, the two lateral brushes should be lowered. For this purpose, push the thumb washer forward (see Figure) with your foot until the brushes just touch the floor.

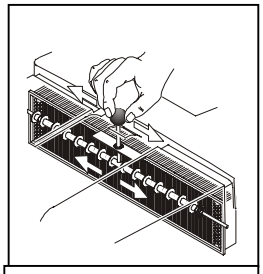


It is possible to adjust the height of the main sweeping brush using the adjustment handle on the left side of the machine (under the dirt collector) (see Figure). Please ensure that the brush tips only touch the floor lightly. If the brushes are adjust too low, this increases the wear on the brushes and the gear components as well as the power consumption. Position 1 - the highest brush position (for new, unworn rollers), position 5 - the lowest brush position (for worn brushes or very uneven floors for a short period of time).

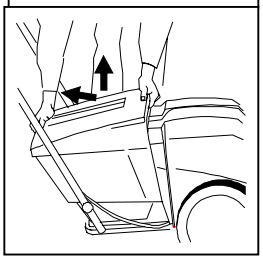


Put the cold starter (A) into the upper position.
After this, keep pressing in the gasoline pump (C) until the resistance has noticeably increased. Subsequent to this, rapidly pull the reversing starter (B) to the end stop. If the motor does not immediately start up, put the cold starter back into the original position and pull the reversing starter again to the end stop.
As soon as the motor is running "true", put the cold starter (A) back into the lower position if this has not already taken place.
If necessary, e.g. in the case of extreme cold, repeat the procedure as described above until the motor starts.

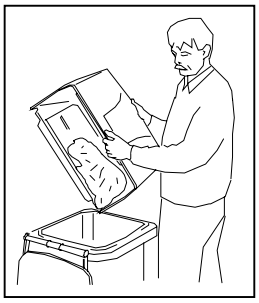
Steering drive:
The machine starts moving when you carefully pull the steering handle towards you. Check the behaviour of the steering drive especially when it is used for the first time so that the machine remains under control. We recommend that you loosen your grip on the steering handle slightly when going around curves to lower the speed in the curve. You will quickly notice that it is easy to operate and move the machine with or without using the steering drive. If there is more dirt, you should push the machine over the dirty place more slowly to achieve the optimum cleaning effect.
In order to move it backwards, loosen the steering handle and pull the machine in the desired direction.



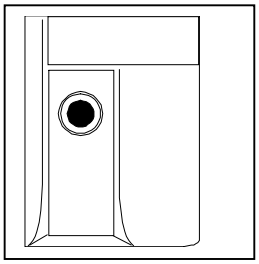
Cleaning filters:
There is a handle in the area of the handle of the dirt container. This should be operated a number of times (see Figure) every time before you empty the dirt collector with the motor shut off. This sets a mechanism into motion so that the loose dirt which is sitting between the lamellas falls directly into the dirt container. If there is stubborn dirt, clean the filter with a brush or remove the filter and tap slightly.



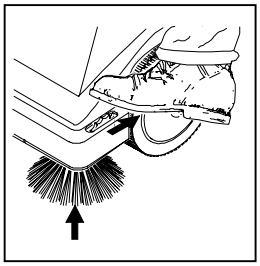
Emptying the dirt collector:
Always take the dirt container in both hands (see Figure). You should put one hand in the front handle area in the middle of the machine. Put the other hand on the upper edge from behind.
Lift the container upwards from behind.



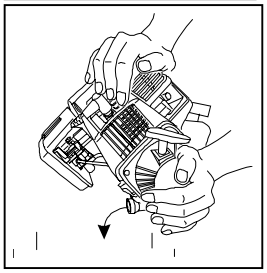
It is easiest to empty it into a rubbish bin over the side edge (see Figure).



Switching off the motor:
A red short-circuit push button (illustration) is located on the console of the traversing handle. To shut off the machine, this button has to be pushed until the motor comes to a complete standstill.



After use:
When you have finished sweeping, shut off the machine. In order to alleviate the load on the lateral brushes, the side brushes have to be put up using the thumb washers every time after it is used (see Figure).



Attention: Check the oil level regularly and adhere to the oil-change intervals!!! Follow the enclosed notices of the motor manufacturer for this. Unscrew the motor in which the oil is to be changed on the frame attachment (2 screws) and tip the motor until the oil has completely run out. Follow the disposal notices. In the beginning, the motor uses approx. 2 -3 cc of oil per operating hour.

Absolutely take note of the following:
The motor has fixed settings for optimum sweeping performance. Do not, therefore, change the speed setting under any circumstances (set speed: 5200 r.p.m.). If a reduction in the speed has been noticed, this can be due to high belt tension or jamming rotary brushes. To remedy this: cf. Chapter 5.

5. Service Work / Troubleshooting

Service Schedule for Tandem KSV 900:

Attention: Absolutely follow the enclosed maintenance instructions of the motor manufacturer (page 16 of the operating instructions)!!!	
Daily	
sweeping brush	check the height adjustment and if there are possibly stuck or rolled up objects
Vacuum: brush on top	clean / check for damage
Monthly	
Battery	check level of liquid and refill if necessary
Belt	check for defects and voltage
sweeping roller and side brush	check for wear

Troubleshooting:

A.) the motor doesn't start	
possible reason	potential solution:
1.) Gas tank empty	Fill up gasoline.
2.) Air filter or spark plugs are dirty	Take out spark plugs or air filter and clean (see the operating instructions of the motor manufacturer).
3.) No fuel in the carburetor	Actuate gasoline pump (see Chap. 4).
4.) Cold starter still in upper position	Put the cold starter in the lower position and repeat the starting procedure.
B.) the results of sweeping are not satisfactory	
possible reason	potential solution:
1.) the dirt container is overfilled	empty the dirt container
2.) sweepings are caught in the sweeping brush	take out the dirt container and remove the object
3.) Speed of the motor is too low	Check the belt tension, loosen if necessary.
C.) the brushes do not rotate	
possible reason	potential solution:
1.) the belt of the power transmission unit is defective / has slipped off	check all of the belts on the machine (7 pieces)
2.) sweepings are caught in the sweeping roller	see B. 2
D.) the steering drive is not functioning / not properly	
possible reason	potential solution:
1.) the tooth belt is defective / has slipped off	see D.1
2.) the friction clutch is not engaging	adjust the setting mechanism on the handle console (part 95)
E.) too much dust develops	
possible reason	potential solution:
1.) the dust filter is clogged	tap out the filter; remove and replace if necessary
2.) the container is improperly inserted	put the container properly in place

6. EU Declaration of Conformity

in accordance with the EU Machinery Directive 89/392/EU, Appendix II A

We

Stolzenberg GmbH & Co. KG
Reinigungsgeräte
D-49124 Georgsmarienhütte

Sweeping suction machine
Tandem KSV

Serial Number:_____
(see data plate; to be entered by customer)

Applicable EU Directives:

- EC standard machines 89-392-EWG of June 14, 1989 (Journal No. L 183 of 06/29/1989 and Journal No. L 198 of 07/12/1991)
- EC standard on electromagnetic compatibility 89-336-EWG and 92-31-EWG (revisions) (Journal No. L 139 of 05/23/1989 and Journal No. L 126 of 05/12/1992)
- EC low voltage standard 73-23-EWG (Journal No. L 77/29 of 03/26/1973)

Harmonised standards applied:

- DIN EN 292 T1 und T2

National standards applied:

- VDE 700 Part 1 (equivalent to DIN EN 60335-1)
- VDE 700 Part 67 (equivalent to DIN EN 60335-2-67)
- VDE 700 Part 72 (equivalent to DIN EN 60335-2-72)
- VDE 700 Part 205 (equivalent to DIN EN 60335-2-205)
- DIN 31000/3.79

It is ensured through internal measures that series-production units conform at all times to the requirements of current EU Directives and relevant standards.

GM-Hütte, den 01.05.1998

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Dipl.-Wirtsch.-Ing K. Stolzenberg
(company management)